

## Perchlorate in Drinking Water: Status of the California MCL

Last Update: May 3, 2004

### Statutory Requirements

**Health and Safety Code §116365(a)** requires DHS, while placing primary emphasis on the protection of public health, to establish a contaminant's maximum contaminant level (MCL) at a level as close as is technically and economically feasible to its public health goal (PHG). The PHG—established by the Office of Environmental Health Hazard Assessment (OEHHA)—is the contaminant's concentration in drinking water that does not pose any significant risk to health, derived from a human health risk assessment.

Health and Safety Code §116293 requires OEHHA to establish a PHG for perchlorate by January 1, 2003, and DHS to establish an MCL by January 1, 2004.

### PHG Status

OEHHA established a 6-µg/L PHG for perchlorate in March 2004. OEHHA **announced when it established the PHG:**

*The National Academy of Sciences (NAS) is conducting an evaluation of U.S. EPA's 2002 Draft Toxicological and Risk Characterization for Perchlorate. This is an important undertaking that may help guide efforts to study the health effects of perchlorate. When that evaluation is completed, OEHHA will carefully review the NAS conclusions and will revise the PHG as necessary (Health and Safety Code Section 116365(e)(1)).\**

### MCL Status

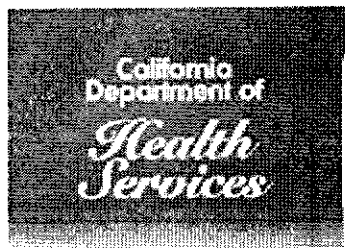
DHS is early in the **regulatory process for an MCL** for perchlorate.

Until the perchlorate MCL is in place, DHS will use an **action level** to protect consumers. The action level is currently 6 µg/L, the same as the PHG.

\*Click here for information on the **NAS evaluation** and the **US EPA's perchlorate assessment**.

**[Return to Main Perchlorate Page](#)**

**[Return to DDWEM](#)**



## Perchlorate in Drinking Water: Action Level

Last Update: May 3, 2004

Perchlorate can interfere with iodide uptake by the thyroid gland; this can result in a decrease in the production of thyroid hormones, which are needed for prenatal and postnatal growth and development, as well as for normal body metabolism.

Because no drinking water standard, or maximum contaminant level (MCL), exists for perchlorate, DHS uses an action level to protect consumers, as it has since 1997. The action level for perchlorate is 6 micrograms per liter ( $\mu\text{g/L}$ ). Detections of perchlorate greater than the action level prompt **certain requirements and recommendations**.

Significant dates in the history of DHS' perchlorate action level are:

- 1997: DHS, with its **early perchlorate findings**, initially established an 18- $\mu\text{g/L}$  action level. DHS used the upper value of the 4- to 18- $\mu\text{g/L}$  range that resulted from the "provisional" reference dose (RfD) that US EPA prepared for perchlorate in support of its Superfund activities (US EPA, 1992/1995).
- 2002: With the release of **revised external review draft** perchlorate RfD (US EPA, 2002)—corresponding to a drinking water concentration of 1  $\mu\text{g/L}$ —DHS concluded that its action level needed to be revised downward. Accordingly, on January 18, 2002, DHS reduced the action level to 4  $\mu\text{g/L}$ . That concentration was the lower end of the 4- to 18- $\mu\text{g/L}$  range from US EPA's 1992/1995 assessment, and coincided with the analytical detection limit for purpose of reporting.
- 2004: The **public health goal** (PHG) for perchlorate (OEHHA, 2004) provided DHS with a contemporary health risk assessment. On March 11, DHS revised its action level to 6  $\mu\text{g/L}$ , a value identical to the PHG that will be used by DHS in developing the **MCL for perchlorate**. Once the perchlorate MCL is in place, an action level will no longer be used.

### References

OEHHA, 2004, **Public Health Goal for Perchlorate in Drinking Water**, Office of Environmental Health Hazard Assessment, March.

US EPA, 1992, Provisional Non-cancer and Cancer Toxicity Values for Potassium Perchlorate (CASRN 7778-74-7) (Aerojet General Corp./CA), Memorandum from Joan S. Dollarhide, Superfund Health Risk Technical Support Center, Environmental Criteria and Assessment Office, Office of Research and Development, to Dan Stralka, US EPA Region IX.

US EPA, 1995, Correspondence from Joan S. Dollarhide, National Center for Environmental Assessment, Office of Research and Development, to Mike Girrard, Chairman, Perchlorate

Study Group.

US EPA, 2002, *Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization*, External Review Draft, **National Center for Environmental Assessment**, NCEA-1-0503, January 16, 2002 [revises the December 1998 external review draft].

**[Return to Main Perchlorate Page](#)**

**[Return to DDWEM](#)**